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STATE
OF
MONTANA
DIVISION OF FORENSIC SCIENCE
DEPARTMENT OF JUSTICE
275 West Front Street, Missoula, MT 59802 (406) 728-4970

Ronald L. Rivers, M.D.
State Medical Examiner

Arnold B. Melnikoff
Laboratory Bureau Chief

Dawn M. Kangas
Administrative Assistant

SHELVED WITH
PERIODICALS

SEPTEMBER 1983

SEMINAR

Investigation of Violent Deaths - Sept. 19-23 - Lansing, Michigan
Open to law enforcement, coroners, attorneys, and physicians
Fee - $350 plus meals, hotel and travel. Call (517) 355-9648

BOOKS

Several people have asked me to recommend books on death investigation.

1) "Medicolegal Investigation of Death", by Spitz & Fisher - $47.75
Published by Chas. C. Thomas. 2600 South First Street, Springfield, Illinois 62717
Accurate information, many photographs

2) "Guidelines for Medicolegal Investigation and Examination of Death" - $20.00
Published by Forensic Sciences Foundation Press, 225 South Academy Blvd, Colorado Springs, Colorado 80910
No Photos, just forms for scene investigators and autopsy guidelines

ACTIVITIES

Coroner Jerry Cloyd and Associate Medical Examiner John Bovington arranged for death investigation seminars for the staff of Central Montana Hospital in Lewistown.

Ken Konzak attended the combined Northwest Association of Forensic Scientists and Canadian Society of Forensic Science meeting in Vancouver, B.C.

Dr. Rivers addressed the South Central Peace Officers Association in Red Lodge, and EMS personnel in Stanford. Dr. Rivers has also been appointed to serve on the Disaster Committee for the National Association of Medical Examiners.

GOOD LUCK

Janis Fulton, Toxicologist, has accepted a position in Seattle with the University of Washington. She has competently and faithfully served the Division of Forensic Science for six years. Since this will cut our toxicology staff in half please bear with us until a replacement can be obtained.

STATE DOCUMENTS COLLECTION

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HELENA, MONTANA 59620

SEPTEMBER

ON CALL SCHEDULE - MONTANA STATE MEDICAL EXAMINER

275 W. Front Street
Missoula, Montana 59802

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3 RON RIVERS
4 RON RIVERS	5 RON RIVERS	6	7	8	9	10 JOHN PFAFF
11 JOHN PFAFF	12	13	14	15	16	17 RON RIVERS
18 RON RIVERS	19	20	21	22	23	24 RON RIVERS
25 RON RIVERS	26	27	28	29	30	

Telephone Numbers: State Office - 728-4970
WATS Line - 243-5796

Home Phone: Dr. Ron Rivers- 728-2033 (Home)
(week nights call unless otherwise indicated)

Dr. John Pfaff - Great Falls
Hospital - 727-3333
Home - 727-3905

Dr. Ken Mueller- Billings
Hospital - 657-7000
Home - 248-3024

ALCOHOL RELATED DEATHS
SEPTEMBER 1983
R. L. Rivers, M.D.

The attorney approached the witness stand with an autopsy and toxicology report in his hand.

"Now, doctor, I notice you have given the cause of death as acute and chronic alcohol poisoning. Is that correct?"

"Yes sir."

"How did you determine chronic alcoholic poisoning?"

"At autopsy the liver, esophagus or gullet, stomach, pancreas and brain had changes typical of long-term alcohol abuse."

"And how did you determine acute alcohol poisoning?"

"By the level of ethanol found in the postmortem blood sample."

"I notice you said ethanol. Can your machine tell contamination from wood or rubbing alcohol?"

"Yes, our gas chromatograph has that capacity."

"Can you be sure that your blood sample wasn't contaminated by stomach contents? It says here that the stomach had ulcerated into the chest cavity."

"Yes, I'm sure it was not contaminated."

"The level of alcohol was .42%. Does that mean he was in a coma?"

"No."

"What does it mean?"

"Only that he was under the influence of alcohol at the time of death."

"No comment on his ability to walk or drive?"

"No, some individuals can walk and drive at that level while others may be in a coma or even dead at that level."

"I notice that you determined his weight to be 289 pounds. Did his obesity influence his alcohol level?"

"Only in that it took more alcohol to reach that level than it would an average individual of 150 pounds."

"At the scene, an officer reports many large bruises over the body and lots of blood in the kitchen and bathroom. Can you account for those findings?"

"Yes, I can."

"Do you agree with the coroner's verdict that this is a natural death?"

"Yes, I do."

QUESTIONS

1) Why is it important to determine the different alcohols?

2) What procedures were taken by the pathologist to insure a pure sample?

3) How did the pathologist account for the bruises and blood?

4) Are all alcohol deaths natural?

ALCOHOL RELATED DEATHS
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ANSWERS

1. Many alcohol analyzers do not differentiate between the alcohols. This may result in a false positive for ethanol. Worse, the lethal dose of wood alcohol or rubbing alcohol is much less than ethanol.

2. When there is the slightest chance of contamination of heart blood by gastric contents the pathologist will remove blood for alcohol analysis from the extremities. When possible, vitreous humour or eye fluid is also analyzed for an alcohol level. If both the eye fluid and blood have roughly the same alcohol level then contamination is improbable.

3. Alcoholics easily bruise because their diseased liver fails to make the chemicals necessary to clot their blood. They stumble and fall a lot so many bruises are seen all over their body.

   They also have ulcers in their stomach and esophagus which often bleed and cause them to vomit blood, sometimes by the quart! Unfortunately, all that blood and bruising makes one think of a brutal beating. But there are usually a lot of bottles and beer cans at the scene. So remember -

   Blood, bruises, bottles and beer cans usually mean booze - not a brutal beating.

4. No. Acute alcohol poisoning can be an accidental death. For example, the college student who chug-a-lugs a quart of whiskey. However, when there is also a degree of chronic alcoholic liver disease then death is correctly listed as natural.